

FRENCHGLEN INTERPRETIVE PLAN

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*Jean this is why I like an IFP
we need to do a sow.*

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Frenchglen Interpretive Center
Interpretive Objectives

Introduction

The purpose of this interpretive plan is to provide guidance for the development of the interpretive exhibits for the Frenchglen Interpretive Center, as well as the five interpretive wayside exhibits along the Steens Mountain Loop Road.

The following are the learning objectives to be met by the overall interpretive program provided for visitors at Frenchglen. Although these are the primary objectives (the minimum objectives to be met via interpretation), it should be understood that all of these will not be attained by every visitor. In fact, some of these objectives may be met by media which are not accessible to all visitors at all times. /For example, some objectives may be met via an interpretive talk which not all visitors may attend; other objectives may be met via a publication obtained only by those visitors who want it. Ideally, at least a few objectives will be met for each visitor, including some in each of the following areas: information and education, attitudes and emotional response, and behavior./

These objectives are organized according to the themes and sub-themes identified in the Frenchglen Interpretive Center Outline.

Visitor Learning Objectives

Visitors, including children, persons with physical and/or mental disabilities, and the non-English speaking, will...:

... have a variety of safe, enjoyable experiences, appealing to most if not all of their senses, and will associate these experiences with the Bureau of Land Management (BLM) and the U.S. Fish and Wildlife Service (USFWS) lands.

... appreciate the need to act responsibly while on the site, will realize the fragility of the Steens Mountain and the Refuge and its biota, and will recognize the need to respect and conserve its components.

... have a general understanding of what significant animals (and plants) are seen within the area and why (and sometimes when) they exist there.

... be aware that humans have used the area for a variety of purposes for at least 4,000 years.

... learn how Steens Mountain and surrounding fault scarps, playas, and basins formed as a result of geologic forces in the not too distant past.

... understand how natural forces continue to shape the area and how man-influenced changes have affected the Steens.

... will be aware that ranching and homesteading have played a major role in the settlement of the Steens area and economy of this part of Oregon.

The Visitor Experience Objectives

Visitors will....:

- encounter Displays/Orientation/Center Designs that warmly welcome visitor and introduce themes.
- feel immersed in natural landscape and lifestyle of area through architectural design.
- have an opportunity to view AV presentation/use small library.
- have an opportunity to experience an interpretive trail through the riparian area from the Center to the P-Ranch and outbuildings.

- have an opportunity to attend guided special programs in an indoor multi-purpose area.
- have an opportunity to volunteer in interpretive programs.
- be able to use outdoor porches with benches that offers a view of a small riparian area. These porches will be accessible when the Center is closed, i.e., orientation, etc.
- wander in town and view outside interpretive signs at Frenchglen Hotel.

Display Objectives

Displays must be designed to stand alone in telling a story and offering interaction to the visitor - but must complement and offer transitions to neighboring displays.

Each display must:

1. Fit within a defined theme or story line having a logical sequence that fits within the main themes for Steens Mountain.

2. Be compatible with other displays/exhibits in written messages and relevance with exhibit panels on the Steens and at the Malheur National Wildlife Refuge.
3. Be accessible and responsive to physically handicapped and visually impaired visitors.
4. Be designed and displayed in a manner ensuring a coherent presentation and be visually integrated with the Center's interior decor.
5. Have a high quality communicative and educational impact on visitors by using a mixture of static and interactive information.
6. Be easily maintained and need little repairs over the first 5 years.
7. Be easily moved and/or disassembled for relocation within the multi-purpose area.
8. Be usable in small spaces by small audiences through conscientious space management and controlling audio volume (when audio is used).

9. Include a three dimensional relief model map of the entire area that will be an effective tool in identifying biological zones, landforms, and sites with cultural significance and be interactive.
10. Avoid the following:
 - a. Overusing static displays because of the limited interest they generate. ("Book-on-a-wall" presentation is to be avoided.)
 - b. High maintenance displays requiring excessive costs and personnel to operate them. (Occasional replacing of lights or computer/laser disks is acceptable, but constant maintenance or frequent parts replacement is not.)
 - c. Complex mechanical displays unless proven effective, reliable, and easily maintained through installation and long-term experience at another facility.

- d. Exhibits that require long periods of involvement or interaction, i.e., lengthy texts, long cycles of message replay longer than 2 minutes (i.e., video or audio), video or computer quizzes or games that encourage longer stays or discourage group use.

Theme Objectives

A. Geology

1. Great Basin and Range

Interpretation at the Interpretive Center should:

Show the formation of the Great Basin and range province which includes volcanism.

Show that the Steens is a true fault block mountain and is the largest of its kind within the northern Great Basin and range province.

Show the great basin characteristics and rain shadow effect which creates contrasting east and westside ecosystems.

Show that the Steens area is still changing due to geological factors such as mass wasting, effects of wind, water, snow, etc., and that Steens area could still be affected by geological forces such as earthquakes and volcanism.

2. Effects of Glaciation

Interpretation at the Interpretive Center should:

Show that water, flowing or frozen, has shaped the surrounding environment and controls the life within it.

Show how the past ice ages have greatly influenced the physical landscape we see today such as the landscape glaciation stories, identification of glaciated features (i.e., headwaters of the Malheur, and how textbook examples of glaciated canyons formed and how they look today).

Show that the possibility, i.e., probability that glaciation and climate change may occur again causing the formation of glaciers on the Steens and elsewhere in the northwest.

B. Hydrology/Importance of Water to the Basin's Range

1. Hydrology as a Result of Geology

Interpretation at the Interpretive Center should:

Show the hydrologic cycle of the area. Show how Steens Mountain affects the climate, precipitation, and runoff of water from atmospheric sources.

The hydrologic cycle is the movement of water by evaporation, transpiration, precipitation, condensation, and gravity. It involves the flow and displacement of atmospheric water, oceanic water, surface water, and subsurface water.

Show how a watershed develops physically. (This theme can be developed graphically.)

A watershed captures, stores, and releases water. Watersheds capture water as weather systems move across the land mass. Forests capture water as clouds condense on the forest canopy. Water is stored in the watershed in the soil in subsurface aquifers, and in standing water - wetlands, ponds, lakes; and in vegetation - leaves, roots, and downed woody debris. Water is released within the watershed through evaporation, transpiration, subsurface movement, and surface runoff (through seeps, springs, rivulets, creeks, streams, and rivers). Surface water flows through the watershed by gravity, carving many main channels, side channels, meanders, and oxbows.

2. Sculpting

Interpretation at the Interpretive Center should:

Show what the results of glaciation are and how it effects hydrology.

Show what a watershed is and its importance to living things.

A watershed is a connected system of drainages, encompassing rivulets, creeks, streams, and rivers. A watershed forms a biologic system that includes many types of biological communities. A watershed provides clean water and habitat for fish and other wildlife, plant communities, and human habitation.

C. Ecosystem

1. Describe an ecosystem.

An ecosystem is a community with its physical environment regarded as a unit or an ecosystem is a community of all plants and animals (including humans) and their environment that function together as an interdependent unit.

Interpretation at the Interpretive Center should:

Show what unique factors make up an ecosystem within the Steens, such as the different life zones which are found at different elevations.

Show that the Steens is a geologic and biologic island rising from desert playa to alpine tundra, with a variety of plants and animals found within this range and show that the staircase effect is more like an escalator with plants and animals responding to climate and other changes by moving up or down the Steens block.

Show that the Steens is a botanic crossroads that is home to alpine plant community not associated with the desert.

Show that the watershed of the Steens is the lifeline for the extensive wetland system of the Malheur National Wildlife Refuge.

Show how life on the Steens including plants and animals have adapted to this biological island.

Show message about the sensitivity of plant communities to human impacts and encourage people to stay on trails and roads.

Show that the landscape has been formed by the interaction of the geology and hydrology of the area.

Streams vary in size from intermittent trickles to constantly flowing rivers. Streams merge together, gaining in velocity, volume, and sediment load. The quality of a watershed is directly affected by the health of its smallest creeks and streams.

Streams function as sediment conveyor belts, moving tremendous loads of soil, sand, boulders, and organic materials, from upland areas to valley floors and deltas.

Water collecting or originating in low areas without drainages forms basins and perennial wetlands. These areas of shallow water are a sink for materials that wash into them that originate at higher location, like the Steens. Malheur Basin is the sink for Steens runoff and ground moisture discharge.

2. Watersheds are Ecosystems

Interpretation at the Interpretive Center should:

Show why watersheds are part of an ecosystem and why they are constantly changing due to physical and biologic forces. Examples of physical forces include erosion, floods, landslides, volcanic events, earthquakes, and drought. Examples of biologic changes include plant succession, soil development, the effects of wildlife such as grazing animals and manipulation of habitat by beaver and humans post glaciation.

Show what the importance of streams and rivers are within a watershed.

The conservation and wise use of streams and rivers are vital to the health of a watershed.

Show how human-caused disturbances can drastically affect a watershed through erosion, introduction of pollutants, removal of large amounts of vegetation, significantly altering the quality of water. Examples of human-caused disturbance can include livestock grazing, road building, and clearing of land.

D. Human Landscape

Interpretation at the Interpretive Center should:

Show that people came to this area because of the rich diversity of plant, animal, and water resources available.

Show how the physical evidence of Native American occupation was found and analyzed.

Be aware of when and how these Native Americans lived in the Steens area and that they had a well established, complex culture, based on upland and marsh resources.

Show how Native Americans live today, here in Burns.

Show the history of early ranchers and homesteaders in timeline from Peter French through the homestead era and connect to present day ranching.

Show the evolution from early ranching to present day ranching and the importance to the local economy.

Show the difference in management from the past to present.

Show the history of the Basque and Irish shepherd within the area and their contribution to the cultural diversity.

Show a brief history of BLM and the USFWS from their beginnings as the General Land Office and the U.S. Grazing Service/BLM, and the importance of the Biological Survey to the USFWS (acquisition of the Malheur National Wildlife Refuge).

E. Ecosystem Management

Interpretation at the Interpretive Center should:

Show that management techniques and strategies of today are a result of the influence of the physical, biological, and historical conditions of the ecosystem and availability of resources.

Show examples of restoration ecology, how it effects ecosystem management, and why it is necessary.

Show importance of cooperation between public and private landowners and how it effects ecosystem management and the visitor.

Show examples of research projects within the area, their results, and their effects on ecosystem management.

Show a variety of management tools such as grazing, fire replanting, vegetation manipulation, stocking and habitat enhancement projects and how these are used in riparian, fish and wildlife, and recreation management and their contribution to ecosystem management.

Show people the extent of the Great Basin and sage steppe ecosystem and how Steens/Malheur fit into this ecosystem area.

Show how Steens is a crossroads for various ecosystem influences (Rocky Mountain, Cascade, Sierra Nevadas, Great Basin, etc.).

Show that special management areas exist such as National Wild and Scenic River, Research Natural Areas, Areas of Critical Environmental Concern, Wilderness Study Areas, and how do they differ and what impacts they have on ecosystem management.

APPENDIX A

INTERPRETIVE HIERARCHY THEMES
FOR THE
FRENCHGLEN INTERPRETIVE CENTER
AND
GEOGRAPHICAL APPROACH FOR ON-SITE INTERPRETATION

Chronological Scheme

The following is a scheme using story lines as examples which show how the chronology might work.

Geology-Hydrology-Flora and Fauna-Native Americans
Early Ranchers-Homesteaders-Government Land Office
U.S. Grazing Service (BLM-1946) Biological
Survey (USFWS-1908) Modern Ranching-
Modern management of public lands
the future.

"Geographical" Approach

These are other areas identified for interpretation at specific sites located on BLM and USFWS lands adjacent to the Frenchglen Interpretive Center.

AWAITING
NEW
APPENDIX
A

These interpretive sites are designed to enhance the visitor's experience on the ground, in addition to what they will receive at the Frenchglen Interpretive Center.

APPENDIX B

MALHEUR NATIONAL WILDLIFE REFUGE:

TOPICS FOR SELECTED INTERPRETIVE SITES

Buena Vista

1. These ponds, and the surrounding areas, are important to ducklings, goslings, and cygnets.
2. Without management, these ponds and the surrounding habitats would not meet the demands of so many waterfowl.
3. These ponds attract other wildlife year-round.
4. Refuge map and orientation panel.

Benson Ponds

1. The variety of habitats here attracts different species of wildlife.
2. The survival of trumpeter swans depends on ponds like these.

3. Different species of owls find the food and habitat they need here.
4. Owls: These silent hunters in the night have unique adaptations.

Knox Ponds

1. Sandhill cranes need a variety of habitats.
2. History/information on cranes.
3. White-face ibis: colonial nesters: There are advantages to flocking together!

P Ranch (Part of interpretive trail from Frenchglen Visitor Center)

1. Through his drive, know-how, and innovativeness, Peter French rose from hired hand to cattle baron, building the largest single cattle ranch in the United States.
2. Remaining structures are testimony to French's innovativeness.

3. Thanks to habitat diversity, the greatest variety of wildlife on the Refuge is found here.

APPENDIX C

BLM STEENS MOUNTAIN LOOP ROAD:

TOPICS FOR SELECTED INTERPRETIVE SITES

Kiger Gorge

Interpretive Media: Interpretive sign to enhance viewing of spectacular canyon

Projected length of visit: 10-30 minutes

Visitor Experience:

Theme: Water, flowing or frozen, has created the surrounding environment and controls the life within it.

1. Messages promote exploration of an ice age past which has greatly influenced the physical landscape we see today. Messages will create a visual painting of the ice age landscape-glaciation stories, identification of features, headwaters of Malheur, Diamond area, how canyons formed.

2. Messages will utilize creative examples to illustrate pressures of ice, not textbook examples of glaciation to explain to people, more contemporary.

East Rim Overlook

Interpretive Media: Interpretive sign

Projected length of visit: 10-30 minutes

Visitor Experience:

Theme: A geologic island, the Steens offers a diversity of living conditions for wildlife ranging from playa to alpine.

1. Messages will promote contrasting steep mountain slopes which drop to a vast desert expanse and the idea that the Steens is a composite of climatic and geologic events which influence the presence of life found here.
2. Messages will explain the origin of the Steens, fault block and basin sinkage, Great Basin characteristics and rain shadow effect which creates contrasting east and west ecosystems.

Summit/Wildhorse Overlook

Interpretive Media: Interpretive trailhead sign to introduce theme and orientation to trails and botanic features, interpretive sign at Summit and Wildhorse Lake Overlooks.

Projected length of visit: 30 minutes-1 hour

Visitor Experience:

Theme: This geologic island serves as biologic crossroads, supporting a diversity of creatures along this ecological staircase from playa to alpine. Water, flowing or frozen, has created the surrounding environment and controls the life within it.

1. Messages for the Summit Trail will introduce the Steens as a botanic crossroads that is home to an alpine plant community not usually associated with the desert.
2. Messages for the Summit will highlight patterns of life on top of the mountain including the ecology of the subalpine and alpine including plant identification and adaptations. Trail orientation messages will include sensitivity of plant community to human impacts.

3. Messages will motivate people to hike to the overlooks.
4. Message at Wildhorse Overlook will provide insight into formation of hanging valley formed during the second glaciation.

Foot of Little Blitzen Trail/Overlook

Interpretive Media: Interpretive sign, trailhead orientation sign with length of trail

Projected length of visit: 20 minutes

Visitor Experience:

Theme: Water, flowing or frozen, has created the surrounding environment and controls the life within it.

1. Messages will offer a more aesthetic poem, insight or reflection for this overlook that serves as a welcome or a conclusion to their experience on the Loop Road.

2. Short interpretive trail to overlook will end at sign that promotes reflection of the idea that water and the sounds of life spring from often hidden places in the high desert. These natural resources have long attracted people to settle and make their home in this region. Mention of wild and scenic river status.

Big Indian Gorge Overlook

Interpretive Media: Interpretive Sign

Projected length of visit: 10-30 minutes

Visitor Experience:

Theme: This geologic island serves as biologic crossroads, supporting a diversity of creatures along this ecological staircase from playa to alpine.

1. Messages will promote identification of upland plant community along dry rocky ridges including commonly seen plants, such as mountain mahogany, and wildlife, including birds within the area.

2. Messages will focus on the riparian vegetation and wildlife found within the bottom of Big Indian Canyon (cottonwood trees, aspen, etc.).

Wild Horse Viewing Area

Interpretive Media: Interpretive Sign

Projected length of visit: 10 minutes

Visitor Experience:

Theme: The sight of a wild horse in this scenic landscape is a symbol of the rural character of the Steens and the past and present human lifestyles associated with it.

1. Messages will promote understanding of the history of how wild horses came to be living in the Steens Mountain region and the history of the various stock with mention of the Riddle Brothers.
2. Messages will include basic field marks and coloration for identification of the different breeds.

3. Messages will include how the needs of the horses are balanced with wildlife and livestock and the management of herds for carrying capacity and the Adopt-A-Horse Program.

APPENDIX D

BLM DIAMOND CRATERS OUTSTANDING NATURAL AREA (ONA):

TOPICS FOR SELECTED INTERPRETIVE SITES

Profile of Opportunities

Self-guided use, open year-round

Average length of stay: 30 minutes to 4 hours

Facilities and services available:

- Interpretive Trail
- Interpretive Signs
- Driving Brochure

The visitor experience:

Scenic viewing of outstanding volcanic features.

Hiking opportunities which encourage discovery and observation of a volcanic landscape and associated life.

A sense of wildness and remoteness encouraged by rustic and low-profile nature of facilities provided.

Central Theme: Magma at Diamond Craters forms a diversity of volcanic features in an array of shapes and sizes and many micro habitats supporting specialized plants or animals.

Supporting Themes:

1. Collision of plates beneath the earth's crust creates bodies of magma which in rise to the surface, create a spectacular assortment of features.
2. Woodrat closets and lake deposits reveal stories of past climates in a stash of seeds, plants, and sediment.
3. Sagebrush and grassland stretch between pockets of aspen and juniper sheltering a surprising abundance of life.

Lava Pit Crater/Orientation Kiosk

Interpretive Media: Orientation Board/Two Interpretive Signs

Average length of visit: 10 minutes

Visitor Experience:

Theme: Magma at Diamond Craters forms a diversity of volcanic features in an array of shapes and sizes.

1. Messages will provide a map and welcome and orient visitors to hiking and viewing opportunities within Diamond Craters, including length, distance, and safety information such as carrying water.
2. Messages will introduce the theme and overall formation and significance of Diamond Craters and will highlight the key features and where to find them in the area.
3. Messages will creatively motivate people about the significance of the resources, instill pride to encourage protection and encourage leave the rocks there.
4. Messages will include an aerial photo of the Craters "pancake."
5. Sign will include basic identification of key features: cored bombs, pahoehoe lava, aa lava, driplets and spatter cones, grabens, maars, and craters.

6. Interpretive sign will include an explanation of Lava Pit Crater and lava lakes, quiet eruptive forming of benches and flank flows.
7. Briefly introduces regional geologic history formation utilizing views into the distance to interpret past volcanic events including Devine Canyon Tuff, Diamond Crater basalts, Jordan Craters, etc.

Trailhead to Graben Dome Overlook

Media: Orientation Sign

Average length of visit: 5 minutes

Visitor Experience:

1. Map and orientation to the trail including length and distance to Graben Dome Overlook.
2. Brief explanation of its significance, size, and its explosive formation in contrast to other formations in the Craters.

Malheur Maar

Interpretive Media: One orientation sign, two interpretive signs

Projected length of visit: 20 minutes

Themes: Woodrat closets and lake deposits reveal stories of past climates secreted in a stash of seeds, plants, and sediment. A unique assemblage of plants, reptiles, and numerous forms of life find a niche amongst the lava.

Visitor Experience:

1. Trailhead orientation sign will orient people to the central theme, distance of the trail.
2. Two signs at lake overlook will focus on formation of Malheur Maar, the pollen core research, and brief introduction to life within the Craters. Messages will provide visual picture of the past landscape. The plant communities and ecology of this site will highlight inhabitants including bats, redwing blackbirds, insects and other wildlife species. The ecotone of life surrounding the maar will be introduced.

A cross section of a woodrat home will be offered.

3. Messages will include focus on the life found in association with the volcanic features including specific adaptations such as melanism in lizards including basic identification of wildlife and birds.
4. Contemporary questions will be posed to consider climate change and the increasing information research reveals.
5. Formation messages will include the idea that volcanic events and processes remove as well as create new aquatic systems on the planet.

APPENDIX E

DIAMOND VALLEY INTERPRETIVE SITE

This should be completed through the cooperation of the Diamond Valley ranchers and located on private land.

Interpretive Media: Interpretive sign

Projected length of visit: 10 minutes

1. Messages promote a look into the current livestock and grazing activities surrounding the community of Diamond, providing insight into the seasonal changes and conditions which shape ranching lifestyles of this valley.
2. This sign will also interpret the history of the community is a possible partnership with local groups.